

and instructive series. Full illustrations, showing all its known characters, will be prepared for the reports of the Ohio Geological Survey. The two known species, *L. Dyeri* and *L. crateriformis*, occur in the Cincinnati group of the Lower Silurian, near Cincinnati, Ohio.

XLVI.—Notes on Coleoptera, with Descriptions of new Genera and Species.—Part I. By FRANCIS P. PASCOE, F.L.S. &c.

[Plate XIV.]

List of Genera and Species.

TROGOSITIDÆ.	HELOPINÆ.
<i>Elestora fulgurata.</i>	<i>Edemutes pretiosus.</i>
OTHNIIDÆ.	— <i>purpuratus.</i>
<i>Elacatis lyncea.</i>	PYCNO CERINÆ.
— <i>laticollis.</i>	<i>Odontopus physodes.</i>
TENEBRIONIDÆ.	— <i>asperatus.</i>
BOLITOPHAGINÆ.	— <i>speciosus (note).</i>
<i>Atasthalus (n. g.) spectrum.</i>	AMARYGMINÆ.
<i>Dysantes (n. g.) taurus.</i>	<i>Cyriogeton (n. g.) insignis.</i>
<i>Calymmus (n. g.?) cucullatus.</i>	CYPHALEINÆ.
— <i>asperulus.</i>	<i>Cyphaleus Mastersii.</i>
<i>Bolitoxenus bifurcus.</i>	CISTELIDÆ.
<i>Heledona nasalis.</i>	<i>Æthyssius eros.</i>
DIAPERINÆ.	PEDILIDÆ.
<i>Allophasia (n. g.) Fryi.</i>	<i>Egestria (n. g.) tæniata.</i>
ULOMINÆ.	— <i>suturalis.</i>
<i>Toxicum grande.</i>	ANTHRIBIDÆ.
ZOPHERINÆ.	<i>Nessiara histrio.</i>
<i>Rhyppasma querulum.</i>	<i>Habrissus heros.</i>
— <i>nanum.</i>	<i>Phides (n. g.) xanthodactylus.</i>
<i>Exeniotis (n. g.) collaris.</i>	<i>Phaulimia Schaumii.</i>
ANCYLOPOMINÆ.	
<i>Ancylpoma (n. g.) punctigera.</i>	

ELESTORA.

(Trogositidæ.)

Caput transversum, obliquum, paulo exsertum; *clypeus* brevissimus, arcuatus, sutura clypeali profunda; *labrum* minutum. *Mentum* brevissimum, antice late emarginatum; *labium* profunde bilobum, margine anteriore ciliatum; *palpi* articulo ultimo dilatato; *maxillæ* lobo interiore inermi. *Oculi* laterales, postice incurvi, tenuiter granulati. *Antennæ* breves, articulo basali subgloboso, secundo ad octavum brevis, gradatim latioribus, tribus ultimis valde trans-

versis, clavam perfoliatam formantibus. *Prothorax* transversus, apice fortiter emarginatus, lateribus antice rotundatus, postice constrictus, basi leviter rotundatus. *Elytra* ovata, supra depressa. *Pedes* æquales; *tibiæ* anticæ subdentatæ, apice calcaratæ. *Prosternum* latum, postice truncatum. *Metasternum* apice productum, in medio canaliculatum. *Mesosternum* triangulare.

M. Lacordaire's "tribu iii. *Gymnochilides*" of the Trogo-sitidæ is distinguished by the "essential character" of the divided eyes, either common, apparently, to both sexes, or peculiar to the male. In *Gymnochila*, *Acrops* (*Anacypta*), and *Narcisa* I have always found them divided, in reality four eyes; in *Leperina**, including eight species, never. Lacordaire also finds them simple in that genus. Mannerheim, however, out of a hundred individuals of the Siberian species of *Gymnochila*, only obtained a single male; and in this the eyes were completely divided. It would therefore seem to be questionable whether the Australian *Leperinæ* are rightly included in it. So far as the genus before us is concerned, having only one specimen, I am unable to say if the undivided eyes are persistent in both sexes. The genus is perhaps most nearly allied to *Leperina*; but its habit, colour, and clothing are altogether peculiar: the latter is neither scales nor hairs, but appears, particularly on the elytra, to be a densely matted material, like the finest velvet; the scutellum alone is covered with long, closely set, silky hairs. A short diagnosis of this species was given in the 'Proceedings of the Entomological Society,' 1868, p. xi.

Elestora fulgurata. Pl. XIV. fig. 1.

E. aterrima, maculis aurantiacis ornata; capite sat remote punctato; antennis glabris, nitidis; prothorace in medio paulo excavato, lateribus tenuiter sulcato-marginato; scutello pilis longiusculis aurantiacis dense tecto; elytris postice paulo latioribus, dorso planatis, lineis longitudinalibus subtiliter elevatis, maculis magnis quatuor decoratis, singulis una exteriore ante medium, una postice ad suturam fere connexa; corpore infra pedibusque nigris, opacis. Long. $6\frac{1}{2}$ lin.

Hab. Penang.

Elacatis lyncea.

E. pallide testacea, supra pilosula, elytris nigro fasciatis et maculatis; capite prothoraceque fusciscentibus, hoc capite manifeste angustiore, lateribus hand denticulato, angulis posticis rotundatis; elytris prothorace latioribus, sat breviusculis, postice gradatim

* *Leperina fusciculata*, Redt. (Novar. Reise, Col. p. 37, pl. 2. fig. 3), is evidently *L. turbata*, Pasc. Journ. of Entom. ii. p. 29.

angustioribus; corpore infra castaneo; pedibus antennisque, clava nigra excepta, sublutescentibus; oculis valde prominulis. Long. $1\frac{1}{2}$ lin.

Hab. Ceylon.

Allied to *E. delusa*, Pasc. (Journ. of Entom. i. p. 53, April 1860, pl. 2. fig. 5), but, *inter alia*, with a narrower prothorax, not denticulate at the sides, and the two posterior angles not emarginate.

Elacatis laticollis.

E. rufo-testacea fusco-variegata, supra pilosula; oculis minus prominulis; antennis articulis tertio ad octavum gradatim brevioribus, clava fuscescente; prothorace sicut fortiter transverso, lateribus subparallelis, angulis posticis obliquis; elytris prothorace haud latioribus, postice gradatim angustioribus, pallide fuscis, maculis rufo-testaceis, nonnullis indeterminatis, notatis; corpore infra fuscescente; pedibus flavo-testaceis; femoribus in medio tibiisque fuscis. Long. 3 lin.

Hab. Batchian.

A larger and darker species than the last, the fusion of the browner shades leaving paler spots at intervals; the broad prothorax, its sides nearly straight and its posterior angles neither emarginate nor rounded, differentiates it from *E. delusa*, as well as from the preceding. *Elacatis* was originally, but hesitatingly, referred by me to Melandryidæ, on account of its heteromerous tarsi and pronotum marked off from the flanks of the prothorax by a narrow ridge. Dr. Leconte, on his recent examination of my collection, at once recognized it as his *Othnius*, a genus founded on a species taken in Nebraska, near the Rocky Mountains; disregarding its heteromerous tarsi, which, he considers, are perhaps peculiar to the males*, he places it near Cryptophagidæ†, as a distinct family. In this I agree with him. The difficulty occurs, as my name is the oldest, whether the name of the family should be changed; but the adoption of Othniidæ will have the advantage of connecting the two names given to a highly specialized form found in such dissimilar faunistic regions as North America and the Indian Islands.

* In *E. delusa*, which was found by Mr. Wallace in Borneo and New Guinea, both sexes are heteromerous. From a note attached to a specimen of this species in the British Museum, it would seem to be very like one from Mexico, named (but not, that I am aware of, described) by Dr. Horn of Philadelphia.

† It is worth noting that *Tetratoma*, to which I compared *Elacatis*, is, together with *Triplax* and *Tritoma*, referred by Dr. Redtenbacher (Faun. Aust.) to this family.

ATASTHALUS.

(Bolitophaginæ.)

Caput latum, transversum, verticale, ante oculos bicornutum; sutura clypeali invisâ. *Palpi* maxillares articulo ultimo elongato, fusiformi. *Oculi* reniformes. *Antennæ* 11-articulatæ, articulo basali modice elongato, secundo longiore quam latiore, cæteris gradatim brevioribus et compressis, 7-10. subcordatis, ultimo obcordato. *Prothorax* gibbosus, in medio bicornutus, lateribus crenatis, postice rotundatis. *Elytra* elevata, parallela, prothorace basi latiora. *Pedes* elongati; *femora* sublinearia; *tibiæ* graciles, sulcatæ; *tarsi* breves. *Prosternum* postice verticale. *Abdomen* breviusculum.

Of this remarkable insect I have seen only a single specimen, and this, without doubt, a male. While in habit it is most like *Bolitotherus cornutus*, Panz., it differs from all other Bolitophaginæ in the last joint of its maxillary palpi being long and fusiform. The epipleuræ of the elytra, as in *Calymmus* and some others, are not well marked off from the flanks of the elytra. As in most other genera of this subfamily, it is probably, in a perfect state, covered with a hard brownish crust, remains of which are still visible.

Atasthalus spectrum. Pl. XIV. fig. 3 (♂).

A. oblongus, niger, setulis subtilissimis sparse adpersus, antennis palpisque ferrugineis; capite cornibus duobus elongatis, singulis apicem versus ramulo breviusculo instructis; prothorace antice latiore, lateribus profunde crenatis, medio cornibus duobus validis subhorizontalibus versus apicem convergentibus; scutello oblongo; elytris seriatim punctatis, tuberculis numerosis, dorso excepto, interjectis; corpore infra vage punctato. Long. 5 lin.

Hab. Malacca.

DYSANTES.

(Bolitophaginæ.)

Caput verticale, rotundatum (vix quadrangulare); sutura clypeali invisâ. *Palpi* maxillares articulo ultimo subsecuriformi. *Oculi* reniformes. *Antennæ* clavatæ, 11-articulatæ, articulo basali parum incrassato, secundo longiore quam latiore, tertio elongato, quarto brevior, quinto ad octavum longitudine subæqualibus; *clava* compressa, triarticulata, articulis transversis, ultimo præcedente haud distincto. *Prothorax* transversus, antice cornibus duobus horizontalibus instructo. *Elytra* oblonga, parallela, supra paulo depressa, prothorace basi latiora, epipleuris angustissimis. *Pedes* graciles; *femora* vix incrassata; *tibiæ* teretes; *tarsi* articulo ultimo elongato. *Prosternum* postice verticale, apice in incisuram mesosterni recepta. *Epipleura* metathoracis distincta. *Acetabula* postica elytra haud attingentia.

The type of this genus has been published by Dr. Redten-

bacher (Novara Reise, p. 127) under the name of *Diceroderes elongatus*. *Diceroderes* is a remarkable Mexican form referred by Lacordaire to Eutelinae, which is differentiated, *inter alia*, from the Bolitophaginae by their short metasternum, elytra without epipleurae, and globose anterior coxae; the hook to the internal maxillary lobe is also given as a character of the Eutelinae; but it is absent in *Diceroderes*, as in the Bolitophaginae. The species described below differs principally from *D. elongatus* in having larger tubercles on the elytra, and the prothoracic horns, instead of being lyrate, are simply curved, approaching a little at the tips, shorter, and stouter at the base.

Dysantes taurus.

D. minus elongatus, fuscus, antennis ferrugineis, articulo quarto quam sequente longiore; prothorace supra quadrituberculato, cornibus validis, tuberculatis, intus arcuatis, apicibus paulo approximantibus; elytris seriatis granulatis, granulis approximatis, tuberculis elongatis numerosis interjectis; corpore infra subtiliter punctulato. Long. $4\frac{3}{4}$ lin.

Hab. Java.

CALYMMUS.

(Bolitophaginae.)

Caput antice angustius, sutura clypeali semilunari. *Oculi* reniformes. *Palpi* maxillares articulo ultimo subsecuriformi. *Antennae* clavatae, 11-articulatae, articulo basali paulo incrassato, tertio sequentibus longiore; *clava* triarticulata, articulis transversis, ultimo praecedente haud distincto. *Prothorax* transversus, lateribus crenatus, antice in laminam elongatam productus, basi bisinuatus. *Scutellum* distinctum. *Elytra* oblonga, parallela, prothorace vix latiora; epipleura postice obsoleta. *Pedes* subtenuis; *femora* subfusiformia; *tibiae* marginibus tenuiter granulatis, margine interiore recto; *tarsi* breviusculi. *Prosternum* postice verticale, apice in incisuram mesosterni recepto. *Epipleura* metathoracis distincta.

This is one of the genera of Dejean's Catalogue which seems never to have been described; but it finds a place exceptionally in Gemminger and Von Harold's great work, in consequence of Montrouzier's *Toxicum Berardi* being referred to it by Perroud. This species, according to a specimen in the British Museum, has an antennal club of six joints, and therefore has nothing to do with *Calymmus*.

Calymmus cucullatus. Pl. XIV. fig. 8.

C. elongatus, fuscus, squamulis minutis parce vestitus; antennis tarsisque ferrugineis; capite inter oculos paulo excavato; pro-

thorace fortiter tuberculato, tuberculis conicis irregulariter adspersis; scutello subcirculari; elytris subseriatim punctatis, tuberculis conicis numerosis internatis; corpore infra subnitido, subtiliter punctulato. Long. $4\frac{1}{2}$ lin.

Hab. Rio de Janeiro.

Calymmus asperulus.

C. brevior, fuscus, antennis pedibusque subferrugineis; prothorace, in medio longitudinaliter excavato, elytris tuberculis conicis magis adspersis, aliisque minoribus numerosis granuliformibus intermixtis; corpore infra ferrugineo, fere impunctato. Long. $3\frac{1}{2}$ lin.

Hab. Columbia.

Bolitoxenus bifurcus.

B. sat latus, modice convexus, niger, indumento fusco tectus, supra irregulariter tenuiter tuberculatus; capite valde transverso; prothorace duplo latiore quam longiore, antice gradatim angustato, supra ante medium cornibus duobus horizontalibus sublyratis, apice plumosis, armato; elytris breviusculis, parallelis, prothorace paulo latioribus; antennis, palpis pedibusque ferrugineis. Long. $3\frac{1}{2}$ lin. (sine cornibus).

Hab. Penang.

Much narrower than *B. gibber*, Motsch., with two rather long horizontal horns, as in *Dysantes*, but not tapering towards the tip. What I think may be the female has two callosities in place of horns, as in both sexes of *B. gibber*.

Heledona nasalis.

H. (♂) breviter cylindrica, nigra, opaca, squamositate fusca adspersa; capite inter oculos planato, clypeo antice in laminam latam erectam recurvato; antennis palpisque rufo-testaceis; prothorace supra sparse nitide granulato, utrinque crenato, antice cornibus duobus horizontalibus, validis, quadratis, apice truncatis et dilatatis, armato; scutello subsemicirculari; elytris latitudine vix sesquilonioribus, singulis costis novem interruptis instructis; corpore infra pedibusque ferrugineis. Long. $2\frac{1}{2}$ lin.

Hab. Penang.

The female differs only in having the head and prothorax unarmed; a stout species, much shorter proportionally than *H. vacca*, Motsch. (*Bolitophagus*), which has longer and subulate prothoracic horns*.

* There is some confusion in Gemminger and Harold's Catalogue, the Ceylon *Byrsax cornutus*, Fab. (*Trox*), being referred to *Bolitotherus*, Cand., a genus founded on *Opatrum cornutum*, Panz., a North-American insect identical with the subsequently described *Opatrum bifurcum*, Fab.

The following table of the genera of the Bolitophaginae may be useful:—

Antennæ 11-jointed.

Eyes divided by the antennary ridge *Bolitophagus*, Ill.

Eyes not divided.

Legs short, femora not extending beyond the body.

Elytra expanded or foliaceous at the sides . . *Byrsax*, Pasc.

Elytra not expanded.

Body elevated, gibbous above *Bolitoxenus*, Motsch.

Body cylindrical *Heledona*, Latr.

Legs longer, femora extending beyond the body.

Last joint of the maxillary palpi short, sub-securiform.

Clypeus separated from the front by a semi-circular groove.

Prothorax entire *Ilyxerus*, Pasc.

Prothorax produced anteriorly (at least in ♂)

Calymmus, n. g.

Clypeus confounded with the front *Dysantes*, n. g.

Last joint of the maxillary palpi elongate,

fusiform *Atasthalus*, n. g.

Antennæ 10-jointed.

Anterior tibiæ compressed and dilated exteriorly. *Orcopagia*, Pasc.

Anterior tibiæ not dilated.

Clypeus recurved *Bolitotherus*, Cand.

Clypeus not recurved.

Prothorax expanded laterally at the base . . *Ozolais*, Pasc.

Prothorax rounded at the base *Mychestes*, Pasc.

Genus mihi invisum *Bradymerus*, Perroud.

(Ann. Soc. Linn. de Lyon, 1865, p. 110.)

ALLOPHASIA.

(Diaperinæ.)

Caput maris in clypeo cornu conico instructo. *Oculi* tenuiter granulati. *Antennæ* breviusculæ; articulo basali valido, obconico, secundo brevissimo, tertio breviter obconico, sequentibus ad decimum valde transversis, ultimoque clavam magnam perfoliatam formantibus. *Prothorax* transversus, basi sulcato-marginatus, apice (♂) in processum porrectum bilobum terminatus, aliter bicornutus. *Elytra* globosa; *epipleura* postice obsoleta. *Femora* compressa; *tibiæ* margine exteriori denticulatæ; *tarsi* breviusculi, subtus sparse setulosi. *Prosternum* postice cuneato-productum, in incisuram mesosterni receptum. *Abdomen* segmentis tribus intermediis æqualibus.

The only genera with which this may be compared, *Diaperis* and *Arrhenoplita* (= *Oplocephala*, Cast. et Br., non Cuv.), have coarsely granulate eyes: in the former, with which it agrees in its antennæ*, the clypeus of the male is unarmed;

* Lacordaire describes the antennæ of *Diaperis* as having the first joint

in the latter, besides the difference of form, the head in the same sex has two strong spines above the eyes. And this is the very remarkable point, that these two spines are transferred to the apex of the prothorax in the insect before us; but, without a close examination, they appear to occupy the same place as in the latter genus. The species here described was found by Mr. Fry, in some numbers, in the hollow of a bamboo; and a pair of these he has kindly presented to me.

Allophasia Fryi.

A. breviter globoso-ovalis, glabra, nitida, fulva; elytris, basi excepta, nigris; capite (σ) inter oculos excavato; antennis pilosis, articulis tribus basalibus fulvis, cæteris nigris; prothorace impunctato, in medio excavato; scutello triangulari; elytris seriatim punctulatis, interstitiis fere impunctatis; corpore infra pedibusque flavo-lutescentibus. Long. $2\frac{1}{2}$ lin.

Hab. Brazil (Espiritu Santo).

Toxicum grande.

T. oblongum, paulo depressum, nigrum, violaceo nitens; capite σ quadricornuto, cornibus duobus anticis elongatis, ellipticis, parallelis, duobus posticis divergentibus, arcuatis, clavatis, apice breviter pilosis; ρ cornibus posticis carentibus; oculis integris; prothorace modice transverso, cum capite subvage subtiliter punctulato; scutello semiorbiculari; elytris tenuiter seriatim punctulatis; corpore infra nigro, metasterno abdomineque subtilissime punctulatis; pedibus glabris, castaneis. Long. 10 lin.

Hab. Borneo (North).

A fine and very distinct species. The female has the posterior horns very short, and the anterior are reduced to mere tubercles.

Rhyasma querulum.

R. obscure testaceo-brunneum, indumento griseo munitum; antennis brevioribus, articulo ultimo distincto; capite parce granulato? prothorace longitudine latitudini æquali, sat confertim granulato, utrinque basin versus parum angustiore, in medio longitudinaliter excavato, ad latera modice explanato, marginibus crenatis; scutello semicirculari; elytris oblongis, singulis disco quadricostatis, costa secunda a scutello versus apicem evanescente, interstitiis biseriatim conferte punctatis; pedibus asperulis; tarsi posticis reliquis manifeste longioribus. Long. $1\frac{3}{4}$ lin.

Hab. Amazons (Ega).

short and obconic, the three following of the same form, the fifth to the tenth very strongly transverse. In *D. boleti*, the type of the genus, it is from the fourth to the tenth, as in *Allophasia*.

Resembles *R. pusillum*, Pasc. (Journ. of Entom. i. p. 326, pl. xvi. fig. 3)*; but it has, *inter alia*, considerably shorter antennæ, a prothorax about equal in length and breadth, and the disk of the elytra with four costæ, the second longer and gradually obliterated behind.

Rhyasma nanum.

R. ferrugineum, indumento griseo tectum; antennis articulo ultimo ut in specie præcedente immisso; prothorace transverso, confertim granulato, in medio planato, ad latera parum explanato, marginibus vix crenatis; scutello semicirculari; elytris postice leviter angustioribus, singulis disco quinquecostatis, costa interiore scutellari vel brevi, quatuor exterioribus versus apicem confluentibus, interstitiis biserialim rugoso-punctatis; pedibus rufescentibus, tarsis posticis reliquis vix longioribus. Long. $1\frac{1}{4}$ lin.

Hab. Amazons (Ega).

The last joint of the antennæ in this species is nearly as obsolete as it is in *Nosoderma*; and the prothorax is not longitudinally excavated above, as in the other two species.

EXENIOTIS.

Caput parvum, retractum; *labrum* breve, sub clypeo insertum; sutura clypeali nulla; *lobi* oculares elevati. *Oculi* rotundati, fortiter granulati. *Antennæ* validæ, pilosæ, 11-articulatæ, art. primo crassiore, 3 sequentibus longioribus, cæteris ad octavum quadrangularibus, 9., 10., 11. clavam formantibus, duobus primis transversim triangularibus, ultimo rotundato. *Prothorax* oblongus, antice utrinque calloso-lobatus. *Scutellum* invisum. *Elytra* elongata, postice gradatim angustiora. *Femora* linearia; *tibiæ* rectæ, haud calcæratæ; *tarsi* validi, cylindrici, subtus parce pilosi, articulo ultimo cæteris conjunctim fere æquali. *Prosternum* latum, depressum, postice angulatum. *Mesosternum* latum, antice emarginatum. *Metasternum* elongatum. *Coxæ* anticæ parvæ, modice distantes.

The only exponent of this genus is a singular-looking insect covered, in a fresh state, with a crust, masking much of its sculpture. The mentum, as it appears *in situ*, appears to be large, transverse, hiding the maxillæ, as in *Rhyasma*, to which it is allied, and with a broad peduncle attaching it to the jugulum; the palpi and mandibles are deeply seated, and the labium is very small and transverse.

* In this figure the costæ are not connected behind, and the short one (second from the suture) only exists in the shape of a few rather more elevated granules. The sculpture of the three species, however, is masked by the remains of the crustaceous substance with which, probably, they are entirely covered in a fresh state.

Exeniotis collaris. Pl. XIV. fig. 7.

E. angusta, fusca, indumento pallidiore dense tecta; capite supra late depresso; antennis prothorace sesquolongioribus; prothorace pone apicem fere cylindrico, apice ipso utriusque fortiter lobato, supra angulato, depresso, tuberculis setigeris paucis munito; elytris latitudine triplo longioribus, singulis tuberculis conicis setigeris in series tres instructis; corpore infra (sine indumento) picco-testaceo, granulis distinctis notato; pedibus tenuiter setulosis. Long. $2\frac{1}{4}$ lin.

Hab. Amazons (St. Paulo).

ANCYLOPOMA.

(Ancylopominæ.)

Caput rotundatum, parum exsertum; *clypeus* distinctus, postice arcuatus. *Oculi* magni, prominuli, reniformes, grosse granulati. *Palpi* maxillares elongati, articulo ultimo securiformi. *Antennæ* validæ, quam corpus dimidio longiores, pilosulæ, 11-articulatæ, art. basali brevi, secundo dimidio brevior, cæteris ad decimum obconicis, subæqualibus, quatuor ultimis sensim crassioribus, ultimo ipso ovato. *Prothorax* subobconicus, apice truncatus, angulis anticis utriusque in spinam recurvam productus. *Elytra* oblonga, paulo depressa, prothorace basi duplo latiora; epipleura integra. *Femora* sublinearia; *tibiæ* rectæ, haud calcaratæ; *tarsi* graciles, 4 postici longiusculi. *Prosternum* subangustum, inter coxas elevatum, postice declive. *Mesosternum* depressum. *Processus* intercoxalis angustus, antice rotundatus.

The structure of the mouth and of the intermediate cotyloid cavities technically approximates this genus to such groups as the Zopherinæ, Stenosinæ, &c.; but it wants the essential characters which would authorize its association with either of them. As I have only one specimen, I have not ventured to examine the trophi, except *in situ*; but the mentum appears to be cordiform, leaving part of the maxillæ exposed on each side, and the labium small and somewhat masked by its palpi, which are inserted, apparently, at its base. The sculpture of the elytra, and the slender elongate intermediate and posterior tarsi, especially the latter, are not found in any members of the subfamilies to which the genus is here approximated, while the form of the prothorax is quite unique. I think there can be no doubt that, according to Lacordaire's system, it represents a new subfamily. Like the species of the two preceding genera it is one of Mr. Bates's discoveries.

Ancylopoma punctigera. Pl. XIV. fig. 6.

A. oblonga, brunnea, pilis longiusculis adspersa; capite rugoso-punc-

tulato; clypeo, palpis antennisque testaceo-ferrugineis; oculis supra subapproximatis; prothorace reticulato-punctato, spinis lateralibus margine antico bidentatis; scutello parvo, argenteo-pubescenti; elytris utrinque parallelis, crebre fortiter punctatis, punctis singulis pilum gerentibus; corpore infra castaneo, vix confertim punctato. Long. 2 lin.

Hab. Amazons (Santarem).

(In the figure the second joint of the antennæ is twice too long, and the head is too much exserted.)

Ædemutes pretiosus.

Æ. ovatus, minus convexus, nitidissime aureo-viridis, purpureo lavatus, femoribus tibiisque splendide purpureis, antennis tarsisque nigris; capite inter oculos foveolis tribus subimpressis; prothorace paulo convexo, tenuiter parce punctulato; elytris seriatim, sed minus fortiter foveatis, foveis haud approximatis, plerumque oblongis, nonnullis elongatis, interstitiis lævigatis; corpore infra nitide viridi-nigro. Long. 5 lin.

Hab. Philippine Islands.

Ædemutes purpuratus.

Æ. ovatus, convexus, cyaneo-chalybeatus, purpureo lavatus, femoribus tibiisque splendide purpureis, tarsis antennisque nigris; capite inter oculos foveolis tribus subimpressis; prothorace subplanato, in medio grosse, interrupte, ad latera crebre tenuiter punctato; elytris seriatim fortiter foveatis, foveis haud approximatis, plerumque oblongis, interstitiis lævigatis, lateribus modice rotundatis; corpore infra nitide viridescenti-nigro. Long. 6 lin.

Hab. Philippines.

These species differ from *Æ. tumidus* in being longer and much less convex, with the elytra differently sculptured, &c. The two here described are at once differentiated by the punctuation of the prothorax.

Odontopus physodes.

O. ovatus, convexus, nitide metallicus, capite prothoraceque purpureis, inæqualiter subtenuiter punctulatis, hoc parvo, valde transverso; antennis viridibus, articulo ultimo nigro; scutello purpureo; elytris valde convexis, saturate viridibus, crebre fortiter punctatis, sutura elevata, plica epipleurali violacea; corpore infra lævigato, violaceo-nigro; pedibus læte viridi-aureis, femoribus anticis dentibus duobus minutis instructis. Long. 9-10 lin.

Hab. Natal.

Odontopus asperatus.

O. oblongo-ovatus, supra subdepressus, nitide nigrescenti-cyaneus, elytris saturate viridibus; capite antice sat fortiter, vertice subtiliter

punctato; antennis nigro-chalybeatis; prothorace modice transverso, irregulariter punctato, pone medium rude biimpresso; scutello nigro, triangulari; elytris manifeste costulatis, interstitiis subbiseriatim fortiter punctatis; corpore infra lævigato, nitide nigro; femoribus anticis infra subbidentatis. Long. 8 lin.

Hab. West Africa (Gold Coast).

These two species and *O. speciosus** differ from the type (*O. cupreus*, Fab.) in their shorter claw-joint, the prothorax not denticulate at the sides, and greater breadth of the prothorax.

CYRIOGETON.

(Amarygminæ.)

Ab *Amarygmo* differt: *Lobi* antennarii dilatati; *femora* fusiformia; *tarsi* subtus dense pilosi.

The antennary lobes (or orbits) not being in the form of ears, this genus should, technically, be placed among the Platygenuous subfamilies of Lacordaire's second cohort of Tenebrionidæ; it is, however, too nearly related to *Amarygmus* to be separated from it more than generically. Of the two other characters, there are some species of the latter genus in which the femora are scarcely linear, or in which the tarsi are scarcely ciliated, the cilia becoming hair-like and more numerous. *Amarygmus æneus*, Cast. (Hist. Nat. Ins. ii. p. 234), is said to have the tarsi pubescent beneath; it may belong to *Eurypera*, to which also *A. convexus* may be referred. In the fine species described below the clypeus bulges out, forming a transverse fold, which is continuous on each side with the antennary orbits.

Cyriogeton insignis.

C. subellipticus, nitidissime cupreus; capite infra oculos excavato; clypeo prominulo plicam transversam formante; antennis nigris; prothorace lateribus postice parallelis, supra fere impunctato; scutello triangulari; elytris modice convexis, sat obovatis, tenuiter seriatim punctulatis, interstitiis latis, fere impunctatis; corpore

* This is an unpublished name; in Dejean's Catalogue it stands as *Pezodontus speciosus*; the following description will serve to distinguish it:—

Odontopus speciosus.

O. oblongus, modice convexus, nitide cyaneus, aliquando violaceus; elytris vel viridibus, vel cupreis, tenuiter costulatis, interstitiis crebre fortiter punctatis; corpore infra violaceo; prosterno latissimo; femoribus infra unidentatis. Long. 10-12 lin.

Hab. Guinea.

infra nigro-piceo, abdomine confertim punctulato; femoribus anticis infra in medio dente valido, aliquando minore, armatis; tarsis subtus rufescenti-pilosis. Long. 10-11 lin.

Hab. Sylhet.

Cyphaleus Mastersii.

C. late ovatus, supra splendide cæruleo-violaceus, aureo-viridi marginatus; capite sat crebre punctulato; prothorace parum convexo, at lateribus explanato, angulis anticis spinoso-productis, dorso foveis octo vel decem impresso, duobus in lineam mediam, utrinque tribus vel quatuor dispositis; scutello triangulari; elytris prothorace multo latioribus, modice convexis, humeris late oblique truncatis, lateribus pone humeros parallelis, apicem versus rotundatis, apicibus spinosis, singulis punctis magnis subseriatim locatis (seriebus circa 5-6), interstitiis subtiliter sparse punctulatis, epipleuris aureo-viridibus; corpore infra femoribusque atris, nitidis; antennis, tibiis tarsisque nigro-piceis, nitidis. Long. 9 lin.

Hab. Queensland (Port Dennison; Gayndah &c.).

The genera of the *Cyphaleinæ* are, with two or three exceptions, feebly separated from one another: the above has the sculptured elytra of *Cyphaleus*; but the prothorax is expanded at the sides, as in *Chartopteryx*, from which it differs in the two penultimate joints of the antennæ being transverse (as in *Cyphaleus*) and the anterior humeral angle rounded. I name this handsome species after Mr. Masters, than whom none has been more successful in collecting the animal productions of Australia.

Æthyssius eros.

Æ. nitidissime igneo-rufus aureo lavatus, antennis nigris, supra disperse pilosulus; capite prothoraceque sat remote punctatis; scutello subquadrato, angulis posticis rotundatis; elytris striato-punctatis, interstitiis convexis, parce punctatis, in certo situ quasi transversim plicatis; corpore infra iridescente; pedibus rufo-brunneis, pubescentibus. Long. 6 lin.

Hab. New South Wales.

Differs from *Æ. viridis*, Bois. (*Atractus*), in its pubescence, the sculpture of the elytra, the punctures in the striae being smaller, less marked, and the transverse intervals between them less distinctly separated by well-defined bars, which are only seen in certain lights, and by the penultimate joint of the posterior tarsi being longer and its sides parallel nearly their whole length. I have previously proposed *Æthyssius* for *Atractus*, Lac., which is the name of an Hemipterous genus. *A. virescens* and *A. columbinus*, Bois., are supposed to be varieties of *Æ. viridis*, which varies from green to red and

violet. The male differs in having longer antennæ and the posterior femora toothed in the middle.

EGESTRIA.

(Pedilidæ.)

Caput trigonatum, collo modice angusto; *clypeus* antice angustior, truncatus, sutura clypeali obsoleta; *labrum* breve, apice rotundatum; *jugulum* antice pedunculatum. *Palpi* maxillares articulo ultimo cultriformi. *Oculi* fere integri. *Antennæ* breviusculæ, filiformes, articulo primo modice incrassato, cæteris ad decimum fere subæqualibus, ultimo in mare duobus vel tribus præcedentibus conjunctim longiore, in fœmina paulo elongato. *Prothorax* oblongus, apice tubulatus et transversim sulcatus. *Elytra* elongata. *Femora* vix incrassata; *tibiæ* rectæ, bicalcaratæ; *tarsi* lineares, articulo penultimo parvo, bilobo. *Coxæ* anticæ cylindricæ, exsertæ; *acetabula* antica aperta. *Processus* intercoxalis angustus, triangularis.

It would, I think, be desirable to unite, as J. du Val has done, the "*Pedilides vraies*" of Lacordaire to the Anthicidæ, the only point differentiating the two being the complete contiguity, or nearly so, of the posterior coxæ in the former, a variable character among the Heteromera, and subject to exceptions here. In the present genus the intercoxal process lies below the line of the coxæ, while in *Diacalla*, to which it is allied, this process distinctly separates them, its apex being received into a notch of the metasternum. *Diacalla* (Journ. of Ent. ii. p. 46) was originally referred by me to the Lagriidæ; but on a closer re-examination I find that the anterior cotyloid cavities are open-behind, whilst in *Ictistygna* (l. c. ii. p. 491), apparently very closely allied to it, they are closed in. This character is supposed to be peculiar to the Lagriidæ and Tenebrionidæ amongst all the families of Heteromera; but in *Ictistygna* it must be considered exceptional, as it would not do to place it and *Diacalla* in two different families. Besides the two species here described, I have five others connected with the genera mentioned above, but not in sufficiently good order for description.

Egestria teniata. Pl. XIV. fig. 9 (♀).

E. nigro-fusca, pilis griseis modice induta, elytris basi silaceis, singulis vitta flavescenti ab humero usque ad apicem ornatis; capite transverso, crebre punctato; clypeo late triangulari, apice rotundato; labro brevi; antennis testaceo-ferrugineis, versus apicem nigricantibus; prothorace pone medium paulo incurvato, oculato-punctato; scutello elongato-triangulari; elytris ♂ sensim angustatis, ♀ fere parallelis, sat confertim punctatis; tibiis, apice

excepto, flavescens; tarsi articulo ultimo mediocri. Long. $3\frac{1}{2}$ – $4\frac{1}{2}$ lin.

Hab. Queensland (Rockhampton).

Egestria suturalis.

E. (♀) fusca, pilis albidis omnino induta; capite oblongo, rugoso-punctato; clypeo transverso, apice late rotundato; labro sat elongato; antennis testaceis, articulo secundo sequentibus manifeste brevioribus, ultimo parum elongato; prothorace utrinque in medio incurvato, oculato-punctato; scutello subquadrato; elytris parallelis, confertim punctulatis, sutura alba e pilis condensatis; tibiisque testaceis, his articulo ultimo elongato. Long. 5 lin.

Hab. North Australia.

Nessiara histrio. Pl. XIV. fig. 2.

N. oblonga, atra, capite rostroque pube minime dense indutis, hoc in medio leviter carinulato; mandibulis nigris, maxillis, palpis antennisque testaceis, clava fusca; prothorace quam latitudine vix longiore, pube minime induto, maculis sex nigris ornato, basi cinereo et maculis duabus nigris notato; scutello parvo, rotundato; elytris depressis, lateribus sensim angustioribus, apice rotundatis, striato-punctatis, postice pube minime tectis, interstitiis alternis cinereo-pubescentibus, alteris nudis, nigris; corpore infra pedibusque cinereo-pubescentibus; femoribus infra versus basin longius pilosis. Long. 10 lin.

Hab. Philippine Islands.

The males of *Nessiara*, at least of this species and *N. didyma*, have the rostrum broader, and notched or toothed at the sides. *N. planata*, Pasc., appears to belong to *Phlæops*, Lac., which is, apparently, principally differentiated by the angular sides of its prothorax. The species described above is one of the most striking of the Anthribidæ; and it is interesting also from its habitat, the Philippine Islands being probably the north-eastern limit of the Malayan beetle-region, whence so large a proportion of the known insects of this family are derived, of which, however, these islands have hitherto furnished a very insignificant part.

Habrissus heros. Pl. XIV. fig. 5.

H. niger, pube albida fusco variegata dense tectus; rostro lato; oculis ovatis, vix obliquis; antennis nigris, articulo tertio paulo incrassato, sequentibus ad octavum æqualibus, longiusculis, sed brevioribus, clava tenui; prothorace obconico, subfusco, fere obsolete maculatum vario; scutello transverse triangulari; elytris oblongis, prothorace paulo latioribus, striato-punctulatis, interstitiis alternis fusco ocellato-maculatis; corpore infra pube densa grisea induto,

segmento ultimo abdominis excepto nudo; pedibus fusco alboque variis; tarsis nigris, anticis articulo primo in medio albo, quatuor posticis articulis primo basi et secundo toto, apice excepto, albis. Long. 11 lin.

Hab. Labuan.

A fine species, differing from *H. pilicornis* in its size, rostrum, eyes, antennæ, and coloration, especially of the tarsi.

PHIDES.

(Anthribidæ.)

A *Plintheria* differt *rostro* in medio carinato, *clava* laxè articulata; *oculis* oblongis; *prothorace* utrinque ampliato-producto, *carina* anteriore a basi remota; *covis* anticis sejunctis, et *tarsis* brevioribus, dilatatis.

One of my two examples of this genus has the rostrum decidedly longer than the other; if this be the male, then there will be very little difference between the sexes; in *Plintheria* the antennæ in the male are nearly three times as long as in the female*.

Phides xanthodactylus. Pl. XIV. fig. 4.

P. oblongus, niger, saturate cervino-pubescens; rostro capite duplo longiore, versus apicem sensim latiore; antennis capite cum rostro haud longioribus, ferrugineis, art. 3-8. gradatim brevioribus, clava extrorsum fulvicante; prothorace supra inæquali, carina medio instructo, nigro-strigoso, basi ante scutellum macula ochracea ornato; scutello quadrato, ochraceo; elytris prothoracis medio vix latioribus, striato-punctatis, singulis tuberculis circa decem notatis; metasterno, abdomine femoribusque dense silaceo-squamosis; tarsis articulis duobus ultimis flavis. Long. 4 $\frac{1}{4}$ lin.

Hab. Fiji.

Phaulimia Schaumii.

P. fusco-castanea, pube subtili subgrisea induta, elytris maculis duabus majusculis communibus nigris ornatis, una basali suboblonga, pallide marginata, altera apicali transversa minore; antennis fuscis, clava nigra, art. duobus ultimis funiculi testaceis; pro-

* The sexual distinctions of *Cedus*, a genus of this family, were unknown when I proposed it; nor were they known to Lacordaire. I may therefore say that my specimens at that time were males (they were afterwards sent by me to Lacordaire). In *C. guttatus* the female has antennæ as long as the body, with a slender elongate club; the female of *C. tuberculatus* has much shorter antennæ, with a stout compact club, while some of the males of this species have antennæ four times as long as the body. Lacordaire is probably right in considering *Byastus cephalotes*, Pasc., to be the female of another species of *Cedus*. There is a fourth in the collection of Mr. Lamb, from Pulo Penang.

thorace transversim conico; elytris subtiliter griseo-pubescentibus; pedibus ferrugineis. Long. 2 lin.

Hab. Ceylon.

Longer and less cylindrical than *P. ephippiata*, the basal patch with a whitish border, &c. I received this species from the late, lamented Dr. Schaum.

EXPLANATION OF PLATE XIV.

- Fig. 1.* *Elestora fulgurata*; 1*a*, mentum and labium and its palpi.
Fig. 2. *Nessiara histrio*; 2*a* (by mistake numbered 12), front view of the head and antennæ.
Fig. 3. *Atasthalus spectrum* (♂).
Fig. 4. *Phides xanthodactylus*; front view of the head and antennæ.
Fig. 5. *Habrissus heros*.
Fig. 6. *Ancylopoma punctigera*.
Fig. 7. *Eveniotis collaris*; 7*a*, head and part of prothorax; 7*b*, side view of head &c.
Fig. 8. *Calymmus cucullatus*; 8*a*, side view of head and part of prothorax; 8*b*, apical lamina of prothorax.
Fig. 9. *Egestria tæniata* (♀).
Fig. 10. Head and antennæ of *Toxicum grande*.
Fig. 11. Prothorax and antenna of *Allophasia Fryi* (♂). The fourth joint of the latter should be transverse, like the one following it.
Fig. 12. See figure 2.

BIBLIOGRAPHICAL NOTICE.

M. TERQUEM's *Researches on the Foraminifera of the Lias and the Oolites.*

- I. *Recherches sur les Foraminifères de l'étage moyen et de l'étage inférieur du Lias.* Par M. TERQUEM, &c. Metz, 1862. Second Mémoire. Extrait des 'Mémoires de l'Académie Impériale de Metz,' année 1860-61.

M. TERQUEM, having given some general information about the Rhizopods, taking Schultze's plan of classification, proceeds to particularize the results of his researches in the several stages of the Lias. As a rule, he finds that where Entomostraca occur, Foraminifera are also found, whether in calcareous, marly, or sandy strata. The Upper Lias has as yet proved unproductive of these Microzoa. In the middle stage, the oolitic marls (*marnes à ovoïdes ferrugineux*) have yielded numerous *Oolinæ* [*Lagenæ*], *Nodosariæ*, *Frondiculariæ*, *Dentalinæ*, *Marginulinæ*, and *Cristellaricæ*, arranged in 59 species by M. Terquem. He found a *Glandulina*, too, and an *Orbulina*, which he had previously termed *Orbiculina*; also materials for two new genera, namely:—(1) *Uncinulina*, described but not named in his first memoir (p. 678)—a free, hyaline, slender tube, straight or curved, square in section, without septa, with attenuated equal ends, variously hooked; (2) *Involutina*, English specimens of which were

Ann. & Mag. N. Hist. Ser. 4. Vol. viii. 27